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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/814,585	03/22/2001	John E. Dolan	KLR 7146.099	3733

7590 06/16/2004
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EXAMINER

ALAVI, AMIR

ART UNIT PAPER NUMBER

2621

DATE MAILED: 06/16/2004

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/814,585

Applicant(s)

DOLAN ET AL.

Examiner

Amir Alavi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 March 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-27 is/are allowed.
- 6) ☒ Claim(s) 28-33 is/are rejected.
- 7) ☒ Claim(s) 34-47 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4.5.6.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

- Applicant is reminded of the proper language and format for an abstract of the disclosure.
- The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.
- The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

- The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- Claim 28 is rejected under 35 U.S.C. 102(b) as being anticipated by Wiggins (US 4,538,185).

Regarding claim 28, Wiggins discloses: An imaging device sensing an object (Please note, figure 1, in correlation to column 2, line 30. As indicated document 26 to be scanned by scanner 10, in this regard, document 26 corresponds to Applicant's object, while the scanner corresponds to Applicant's imaging device); a backing in opposing relationship with said object (Please note, figures 1 and 4, in correlation to column 4, lines 51-54. As indicated an area between the opposite or left side of the document and the adjoining left side edge of platen 26 is covered directly by the corrugated surface 63 of cover 12, in this regard, cover 12 and it's corrugated surface 63 correspond to Applicant's backing); and wherein

said imaging system determines at least one general bounding region of said object (Please note, figure 4, in correlation to column 4, lines 60-62. As indicated position and size of the document 26 on platen 24 is readily identified).

Claim Rejections - 35 USC § 103

- The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- Claims 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiggins (US 4,538,185) in view of Dobbs et al. (US 5,130,789).

Regarding claim 29, Wiggins discloses: An imaging device sensing an object (Please note, figure 1, in correlation to column 2, line 30. As indicated document 26 to be scanned by scanner 10, in this regard, document 26 corresponds to Applicant's object, while the scanner corresponds to Applicant's imaging device); a backing in opposing relationship with said object (Please note, figures 1 and 4, in correlation to column 4, lines 51-54. As indicated an area between the opposite or left side of the document and the adjoining left side edge of platen 26 is covered directly by the corrugated surface 63 of cover 12, in this regard, cover 12 and it's corrugated surface 63 correspond to Applicant's backing); and wherein said imaging system determines at least one general bounding region of said object (Please note, figure 4, in correlation to column 4, lines 60-62. As indicated position and size of the document 26 on platen 24 is readily identified).

However, Wiggins does not specifically disclose, wherein converting a first color space of an image to a second color space where the luminance of said image is enhanced over the first color space for determining said at least one boundary of said object.

On the other hand Dobbs et al., in the same field of endeavor disclose, wherein converting a first color space of an image to a second color space where the luminance of said image is enhanced over the first color space for determining said at least one boundary of said object (Please note, figure 5 in correlation to column 8, lines 29-55. As indicated the luminance axis of the Y,I,Q

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coordinate system into which the original RGB values of the pixel of interest have been converted, in the form of an elliptical cylinder 40 which has an upper boundary plane 40U and a lower boundary plane 40L).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize this color space conversion of Dobbs et al., in Wiggins's invention, because as Dobbs et al., on column 8, lines 47-48 disclose, as a result of such color space conversion, the luminance contour detail of the object is preserved).

Regarding claim 30, Dobbs et al., disclose wherein said first color space includes a plurality of dimensions and said second color space includes fewer dimensions than said first color space (Please note, column 8, line 36-37, wherein the first color space RGB has three dimensions and the second color space is one dimensional luminance).

Regarding claim 31, Dobbs et al., disclose wherein said first color space is red, green, and blue, and said second color space is luminance (Please note, column 8, line 36-37, wherein the first color space RGB has three dimensions and the second color space is one dimensional luminance).

Regarding claim 32, Dobbs et al., disclose wherein said imaging system increases the differences of values in the range of likely document edge values (Please note, column 4, lines 40-62).

Regarding claim 33, arguments analogous to those presented for claim 29 are applicable.

Allowable Subject Matter

- Claims 1-27 are allowed.
- Claims 34-47 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
- The following is a statement of reasons for the indication of allowable subject matter: None of the prior art disclose or fairly suggest wherein, a backing in opposing relationship with an object having a second background color substantially the same as a first background color and wherein an imaging system determines at least one general bounding region of said object based upon a shadow cast onto said backing by said object.

Other prior art cited

- The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Yang et al. (US 5,760,412) is pertinent as teaching method and apparatus for sensing the presence of a line of data from a document on a transparent surface.

Wober et al. (US 5,719,958) is pertinent as teaching system and method for image edge detection using discrete cosine transforms.

Kamon (US 4,875,104) is pertinent as teaching document sheet position detecting device for image forming apparatus.

Habets et al. (US 5,963,767) is pertinent as teaching image printing apparatus.

Ancin (US 5,956,468) is pertinent as teaching document segmentation system.

Beretta (US 5,901,243) is pertinent as teaching dynamic exposure control in single scan digital input devices.

Chikauchi (US 4,823,395) is pertinent as teaching image information recognition apparatus.

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Contact Information

- Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Amir Alavi whose telephone number is (703) 306-5913.
- The Examiner can normally be reached on Monday through Thursday from 8:00 a.m. to 6:30 p.m. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Leo Boudreau, can be reached at (703) 305-4706.

Any response to this action should be mailed to:

Assistant Commissioner for Patents

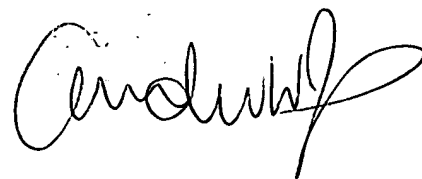
Washington, D.C. 20231

Or faxed to:

(703) 872-9306, ("draft" or "informal" communications should be clearly labeled to expedite delivery to Examiner)

Hand delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist). Any inquiry of a general nature or relating to the status of this application should be directed to the T.C. Customer Service Office whose telephone number is (703) 306-0377.

AA
Group Art Unit 2621
07 June 2004



**ANDREW W. JOHNS
PRIMARY EXAMINER**